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(54) TRANSMISSION POWER CONTROL METHOD, MOBILE TERMINAL AND BASE STATION

(57)Abstract:
PROBLEM TO BE SOLVED: To provide a signal transmission power control method in a spread spectrum communication system enabling to improve S/N ratio and increase the number of terminals to be accommodated in each base station.
SOLUTION: In a base station, a code sequence Wn out of orthogonal code sequences for spectrum spreading is dedicatedly assigned to measuring the S/N. Each terminal performs inverse spreading against a signal received from the base station so as to eliminate a signal component and to extract a noise component using the orthogonal code sequence Wn for dedicate use in S/N measurement. Each terminal then obtains an S/N both from the noise component and from either a pilot signal obtained from inverse-spreading the received signal using other orthogonal code sequence or the transmission signal, to transmit to the base station as a power control signal. The base station controls signal transmission power to each terminal based on the S/N information received from each terminal as the power control signal. Thus each terminal can obtain S/N promptly, which enables the base station to control transmission power so that respective terminals in a cell obtain equal S/N. As a result it becomes possible to improve the S/N by approximately 7.4 dB compared to the case without conducting power control, or to increase the number of terminals which can communicate at a time by approximately 5.5 times when a minimum S/N is set to an identical value.